U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
SAN MATEO THORNMINT
Acanthomintha obovata ssp. duttonii

CLASSIFICATION: ENDANGERED
Federal Register Notice 09/18/1985 50 FR 37858
http://ecos.fws.gov/docs/federal_register/fr1021.pdf
(865 KB)

This plant was listed as endangered by the California Department of Fish and Game in July 1979, under the name *Acanthomintha duttonii*. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range), also under this alternate name.


San Mateo Thornmint, Jo-Ann Ordano
© California Academy of Sciences

CRITICAL HABITAT: Not designated

RECOVERY PLAN: Final
Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area; September 30, 1998.
http://ecos.fws.gov/docs/recovery_plan/980930c_v2.pdf (22 MB)

5-YEAR REVIEW: Started March 25, 2009
http://www.fws.gov/policy/library/E8-4258.html

DESCRIPTION
This is an aromatic annual herb of the mint family (Lamiaceae). The 4 to 20 centimeters (1.6 to 7.9 inches) high plants are typically unbranched, though most populations contain some plants branched from near the base. No other species with a similar appearance occurs within the range of the San Mateo thornmint.

The plants have squarish stems and opposite leaves. The leaves are 8 to 12 millimeters (0.3 to 0.5
inch) long and are oblong to egg-shaped and may have toothed margin.

See the recovery plan (above) for more information about serpentine soil species.

Contact the Coastal Branch of our office (formerly the Coast-Bay-Delta Branch) at 916-414-6625 for consultations concerning serpentine soil species.

The Bay Checkerspot Butterfly PDF | RTF is an insect that depends on serpentine soil plants, primarily dwarf plantain (*Plantago erecta*).

Flowers are white or sometimes tinged with lavender and occur in tight clusters surrounded by almost round prominently spined bracts. Bracts are small leaf- or scale-like structures associated with an inflorescence.

San Mateo thornmint is an annual herb, living less than 1 year and completing the entire life cycle from seed germination to seed production in a single growing season. Flowers appear from

April through June or July. The plant is thought to be insect-pollinated. Pollinators are likely to include native bees from the families Apidae (bumble bees, honey bees, euglossine bees), Anthophoridae (cuckoo bees, digger bees, carpenter bees), and Megachilidae (leaf cutting bees).

SERPENTINE SOIL PLANTS:

Serpentine soils are formed from weathered volcanic (ultramafic) rocks such as serpentinite, dunite, and peridotite. These soils provide a harsh environment for plant growth. Several factors contribute to the inhospitability of serpentine soils to plant growth

1) Low calcium-magnesium ratio;

2) Lack of essential nutrients such as nitrogen, potassium, and phosphorous; and

3) High concentrations of heavy metals (mineral toxicity).

However, serpentine plant species have adapted to serpentine soils and require them to survive.

DISTRIBUTION

San Mateo thornmint is restricted to serpentine soils of chaparral and valley and foothill grasslands in San Mateo County. The species occupies slopes and flats with deep, heavy-clay soil inclusions. The only remaining large population, in Edgewood County Park, is a remnant of a more extensive population damaged by motor-vehicle use. Edgewood County Park also contains a small subpopulation. There is an introduced population at Pulgas Ridge.

U.S. Geological Survey 7.5 Minute Quads: Palo Alto (428B)* 3712242, Woodside (429A) 3712243, San Mateo (448D)* 3712253. (*An asterisk means that the species is believed to have been extirpated from the quad.)

THREATS

San Mateo thornmint is seriously threatened by urbanization, which extirpated two populations. Road construction may have destroyed a third. The extant populations are threatened by development, off-road vehicles and vandalism.

REFERENCES FOR ADDITIONAL INFORMATION

General references about California plants
www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

Jokerst, J.D. 1991. A revision of *Acanthomintha obovata* (Lamiaceae) and a key to the taxa of *Acanthomintha*. Madroño 38: 278-286.

Kruckeberg, A.R. 1984a. California serpentines: Flora, vegetation, geology, soils, and management problems. University of California Press, Berkeley, California. 180 pp.

_____. 1984b. The flora on California's serpentine. Fremontia 11(5): 3-10.

Steeck, D.M. 1995. Reproductive biology of a rare California annual, *Acanthomintha duttonii*, and its congener, *Acanthomintha obovata* ssp. *cordata*. Master's thesis, University of California, Davis, CA.

Thomas, J.H. 1961. Flora of the Santa Cruz Mountains of California. Stanford University Press, Stanford, California.

Photo Credit: Jo-Ann Ordano © California Academy of Sciences. Larger image and details: http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&seq_num=171685&one=T

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825
Phone (916) 414-6600
FAX (916) 414-6713

Last updated August 24, 2009